

IN THE SPECIFICATION:

Please amend the paragraph starting at page 1, line 19 as follows.

--Presently, in means to improve the functions for the photosensitive drum and the transfer material conveying mechanism or the like, instead of using a photosensitive drum, an image forming apparatus using an endless belt for a photosensitive body serving as an image carrier, or an image forming apparatus using an endless belt for a transfer material conveying ~~mechanism~~ mechanism, has been developed.--

Please amend the paragraph starting at page 2, line 5 as follows.

--Typically, the tolerance for an outer diameter of a driving roller for driving the endless belt is strictly defined so that the moving speed of the endless belt precisely conforms with a recording position. However, due to the internal warming of the image forming apparatus body or change in the environmental temperature, the driving roller expands or contracts to change the moving speed of the endless belt, and results to in problems such as deterioration in the precision of recording position and degrading of image quality.--

Please amend the paragraph starting at page 2, line 13 as follows.

--Therefore, conventionally, methods such as ~~as~~ as using a material resistant to heat expansion for the driving roller, or measuring the temperature surrounding the driving roller and anticipating the diameter of the roller, have been used as a speed controlling means for controlling the moving speed of the endless belt.--

Please amend the paragraph starting at page 3, line 6 as follows.

--Accordingly, this invention has as an object to detect change in moving speed of the endless belt from thermal expansion more simply and precisely.--

Please amend the paragraph starting at page 4, line 8 as follows.

--The speed control means being based on a pulse count of the driven roller when the value of movement of the endless belt, the driven roller, and the driving roller ~~are~~ is substantially equal to a common multiple of a peripheral length of the driven roller and a peripheral length of the driving roller can prevent error from change of speed caused by the eccentricity of the driven roller and enhance precision in controlling the endless belt.--

Please amend the paragraph starting at page 5, line 15 as follows.

--The above and other objects and features of the invention are apparent to those skilled in the art from the following preferred embodiments thereof when considered in conjunction with the ~~accompanied~~ accompanying drawings, in which:--

Please amend the paragraph starting at page 5, line 19 as follows.

--FIG.1 is a schematic ~~cross-sectional~~ cross-sectional view showing a color image forming apparatus for belt speed control of a belt conveying apparatus ~~regarding~~ according to this invention;--

Please amend the paragraph starting at page 5, line 22 as follows.

--FIG.2 is a schematic ~~cross-sectional~~ cross-sectional view showing a signal generating portion of a driven roller portion ~~regarding~~ according to this invention which generates one pulse per rotation;--

Please amend the paragraph starting at page 5, line 26 as follows.

--FIG.4 is a view showing a structure of a driven roller portion ~~regarding~~ according to this invention which generates two pulses per rotation (FIG.4 (a) shows ~~two-sided~~ two-sided D-cut, FIG.4 (b) shows one-sided D-cut with two pulses generated); --

Please amend the paragraph starting at page 6, line 3 as follows.

--FIG.5 is a view showing the change of speed for a driving roller, a driven roller, and an endless belt ~~regarding~~ of the image forming apparatus of this invention;--

Please amend the paragraph starting at page 6, line 8 as follows.

--FIG.7 is an explanatory view showing a surrounding of a speed detecting sensor attachment portion ~~regarding~~ according to this invention.--

Please amend the paragraph starting at page 6, line 20 as follows.

--FIG.1 is a cross-sectional view showing a schematic of a color image forming apparatus ~~regarding~~ according to the first embodiment of this invention.--

Please amend the paragraph starting at page 6, line 22 as follows.

--The color image forming apparatus shown in FIG.1 has four photosensitive drums 1 (1a, 1b, 1c, 1d); each photosensitive drum 1 is, for example, surrounded by a charging means 2 (2a, 2b, 2c, 2d) for charging equally to the surface of the photo sensitive drum 1, an exposing means 3 (3a, 3b, 3c, 3d) for forming an electrostatic latent image upon the photosensitive drum 1 by ~~cradiation~~ irradiation of a laser beam based on image information, a developing means 4 (4a, 4b, 4c, 4d) for visualizing a toner image by sticking toner to the electrostatic latent image, a transferring means 5 (5a, 5b, 5c, 5d) for transferring the toner image on the photosensitive drum 1 to a transfer material, and a cleaning means 6 (6a, 6b, 6c, 6d) for removing the transferred toner remaining on the surface of the photosensitive drum 1; and such arrangement ~~comprise~~ forms an image forming means.--

Please amend the paragraph starting at page 7, line 8 as follows.

--The photosensitive drum 1 serving as an image carrier, the charging means 2 serving as a processing means operating upon the photosensitive drum 1, the developing means 4, and the cleaning means 6 for removing the toner ~~comprise~~ are formed into a united body of a cartridge type to form a process cartridge 7 (7a, 7b, 7c, 7d).--

Please amend the paragraph starting at page 7, line 13 as follows.

--A conveying means 9 ~~comprised of~~ comprising an electrostatic conveying belt *A* conveys a transfer material *S* fed from a feeding portion 8 to the image forming means, and after a color image is recorded by orderly transferring a toner image of each color to the transfer

material *S*, the transfer material *S* has an image fixed thereto at a fixing portion 10, and is discharged from at a discharge portion 13 by a pair of discharge rollers 11, 12.--

Please amend the paragraph starting at page 8, line 3 as follows.

--The feeding portion 8 ~~is comprised of~~ comprises a sheet-feeding cassette 8a, a multi-sheet-feeding tray 8b serving as a multi-feeding apparatus, a multi-feeding portion 8c, and a resist roller 8d.--

Please amend the paragraph starting at page 9, line 24 as follows.

--The developing means 4 is comprises, for ~~example, comprised of~~ example: toner portions 4a1, 4b1, 4c1, 4d1 where each contain a toner for the colors of black, cyan, magenta and yellow; and developing rollers 4a2, 4b2, 4c2, 4d2 for performing developing by being arranged adjacent to the surface of the photosensitive drum, being rotatively driven by a driving portion (not shown), and being applied with developing bias voltage from a developing bias electric source (not shown).--

Please amend the paragraph starting at page 10, line 16 as follows.

--The electrostatic conveying belt 9a serving as an endless belt (transfer material carrier) comprising the conveying means 9 is stretchingly supported by four rollers which are a driving roller 9b, a tension roller 9d, and driven rollers 9c, 9e, and is arranged opposite from all four of the photosensitive drums 1a, 1b, 1c, 1d. Since the electrostatic conveying belt 9a is required to be steadily driven by the driving roller 9b without slipping, a metal roller wrapped with a thin rubber or the like having a thickness of approximately 1mm is used as the driving

roller 9b ~~by considering~~ in consideration of a driving grip performance and durability of the electrostatic conveyor belt 9a.--

Please amend the paragraph starting at page 10, line 25 as follows.

--However, since the coefficient of linear expansion for an elastic material, such as rubber or the like, is larger in comparison with a metal material, such elastic material causes expansion or contraction due to internal warming or a change in environmental temperature and results ~~to~~ in change in diameter of the driving roller 9b. Therefore, even if the electrostatic conveying belt 9a is driven with the same rotary count by the driving roller 9b, the belt driving speed (moving speed of the conveying belt 9a) will change and cause phenomena such as deterioration in precision of recording position and decrease in image quality.--

Please amend the paragraph starting at page 11, line 23 as follows.

--An example of a method for creating one pulse per rotation of the driven roller is a method of notching or perforating a portion of the driven roller. As shown in FIG.2 and FIG.3, the edge portion of the axis 25 of the driven roller 9c (or the driven roller 9e) has a prescribed arc and chord cut out therefrom to form a D-cut portion (such as a D-cut portion 26 shown in the drawing) or a groove or the like. Nevertheless, when just a D-cut portion is formed, the time approximately equivalent to that for making one rotation is necessary in order to begin reception of a signal when a signal is generated just after the reception of a signal ~~had~~ has begun. Therefore, when time is required to be reduced, plural pulses rather than a single pulse can be generated as a signal corresponding to one rotation of the driven roller [~~e.g.~~, e.g., with a method of forming a D-cut portion on each axis-end (see FIG.4 ~~(a)~~ (a)) or with a method of using two

pulses corresponding to the time when light is blocked off and when light is passed through (see FIG.4 (b))~~so (b))~~ so (b)) so that a signal soonest from the beginning of the reception of signals can be received as the pulse for a single rotation and shorten the time in waiting for the reception of signals to begin.--

Please amend the paragraph starting at page 13, line 3 as follows.

--Nevertheless, since the driving roller 9b and the driven roller 9c are both eccentric, the prescribed distance  $L$  is set to have a distance substantially equal to the moving distance of the electrostatic conveying belt 9a when driving roller 9b and driven roller 9c ~~rotated~~ rotate for an integral number of time(s) so that detection error caused by unevenness of speed from the eccentricity of the driven roller 9c can be prevented to increase speed control precision. That is, the prescribed distance  $L$  is set to be substantially equal to a common multiple of the circumferential length of the driven roller and the circumferential length of the driving roller. Describing the foregoing more precisely, the prescribed distance  $L$  is set to be substantially equal to a common multiple of the moving distance  $Lc$  of the electrostatic conveying belt 9a for one rotation of the driven roller 9c and the moving distance  $Lb$  of the electrostatic conveying belt 9a for one rotation of the driving roller 9b since the circumferential length of a roller and the moving distance for one rotation do not always match when considering the thickness of a electrostatic conveying belt.--

Please amend the paragraph starting at page 13, line 22 as follows.

--Further, detection error caused by the unevenness of speed from the unevenness in the thickness of the electrostatic conveying belt 9a can be prevented by setting the prescribed

distance  $L$  to be substantially equal to a common multiple of the circumferential length of the driven roller and the circumferential length of the electrostatic conveying belt 9a. More precisely, the prescribed distance  $L$  is set to be substantially as equal to a common multiple of the moving distance for one rotation of the driven roller 9c and the moving distance  $L_a$  of the electrostatic conveying belt 9a for one rotation of the electrostatic conveying belt 9a.--

Please amend the paragraph starting at page 14, line 20 as follows.

--Although the driven roller has a considerably low thermal expansion rate, in which the actual thermal expansion in the diameter for the driving roller is approximately 0.34 % under the warming temperature of 30°C, and the thermal expansion in the diameter for the driven roller for speed control is approximately 0.035 % under the warming temperature of 30°C, thermal expansion is not ignorable for further prevention of detection error since thermal expansion is a direct cause ~~for~~ of measurement error.--

Please amend the paragraph starting at page 14, line 27 as follows.

--Accordingly, as shown in FIG.6, the coefficient of linear expansion of the driven roller is set to be substantially equal to the coefficient of linear expansion of a member (see side-panel 27 of FIG.6) which defines an interval for the photosensitive drums 1 serving as the image forming means arranged with a prescribed interval on the electrostatic conveying belt 9a; accordingly, even when the driven roller ~~had~~ has thermally expanded to cause extension in the time for one rotation, an increased distance caused by the belt speed being erroneously detected as moving slower than the actual speed thereof to cause the electrostatic conveying belt 9a to move faster than intended and an expanded distance caused by the expansion in the distance



between each image forming apparatus will be substantially balanced so that color deviation for each color can be prevented during an actual forming of an image.--

Please amend the paragraph starting at page 16, line 24 as follows.

--In color recording, the conveyance supporting rollers 14 are withdrawn in a left direction and separated from the electrostatic conveying belt 9a. On the other hand, in monochrome recording, the cam mechanism moves the conveyance supporting rollers 14 in a right direction so that the conveyance supporting rollers 14 ~~contacts and pushes~~ contact and push against the electrostatic conveying belt 9a. Therefore, even though the electrostatic conveying belt 9a remains in contact with a black photosensitive drum 1d, the electrostatic conveying belt 9a is separated from the rest of the photosensitive drums 1a, 1b, 1c.--

Please amend the paragraph starting at page 17, line 10 as follows.

--Reference numeral 10a represents a cylindrical fixing belt having an electromagnetic heating layer, and the cylindrical fixing belt 10a is guided by a belt-guide member 10c having a built-in magnetic field generating means ~~comprised of~~ comprising an excitation coil and a T-letter shaped magnetic core.--